

WHAT IS CLAIMED IS:

1. A probe block assembly, comprising:

2 a probe block, said probe block comprising a probe block body, one  
or more probes, and one or more self-centering spring receptacles, said  
4 probe block body having a first probe block body dimension along a first axis  
and a second probe block body dimension along a second axis;

6 one or more self-centering springs, one each seated in each of said  
one or more self-centering spring receptacles; and

8 a probe block frame which floatably seats said probe block on said  
one or more self-centering springs within said probe block frame along said  
10 first axis, said probe block frame having a first probe block frame dimension  
along said first axis that substantially matches said first probe block body  
12 dimension of said probe block body plus a predetermined small amount  
sufficient to allow said probe block to float within said frame along said first  
14 axis but insufficient to allow significant displacement of said probe block from  
a centered position of said frame along said first axis, and said probe block  
16 frame having a second probe block frame dimension along said second axis  
that substantially matches said second probe block body dimension of said  
18 probe block body plus a predetermined small amount sufficient to allow said  
probe block to float within said frame along said second axis but insufficient  
20 to allow significant displacement of said probe block from a centered position  
of said frame along said second axis.

2. A probe block assembly in accordance with claim 1, wherein:

2 said first axis is perpendicular to said one or more probes of said  
probe block.

3. A probe block assembly in accordance with claim 1, wherein:

2 at least two of said plurality of spring receptacles comprise a  
cylindrical bore with circular cross-sectional area characterized by a  
4 cylindrical bore diameter and a cylindrical bore length; and

at least two of said plurality of springs comprise a coil spring  
6 characterized by a coil spring diameter smaller than or equal to said

8 cylindrical bore diameter and a linear coil spring length greater than said  
cylindrical bore length.

2 4. A probe block assembly in accordance with claim 3, wherein:  
said probe block frame comprises a plurality of frame self-centering  
spring receptacles, one each coaxially aligning to one each of said one or  
4 more self-centering spring receptacles of said probe block when said probe  
block is seated within said probe block frame such that a portion of said  
6 respective self-centering spring is seated in said respective frame self-  
centering spring receptacle.

2 5. A probe block assembly in accordance with claim 4, wherein:  
said plurality of frame self-centering spring receptacles are  
countersunked.

2 6. A probe block assembly in accordance with claim 4, wherein:  
said plurality of frame self-centering spring receptacles and said  
plurality of probe block self-centering spring receptacles are countersunked.

2 7. A probe block assembly in accordance with claim 3, wherein:  
said cylindrical bore diameter is a predetermined amount greater than  
said coil spring diameter sufficient to allow said respective coil spring to float  
4 within said cylindrical bore along said second axis but insufficient to allow  
significant displacement of said coil spring from a centered position within  
6 said cylindrical bore along said second axis.

2 8. A probe block assembly in accordance with claim 7, wherein:  
said probe block frame comprises a plurality of frame self-centering  
spring receptacles, one each coaxially aligning to one each of said one or  
4 more self-centering spring receptacles of said probe block when said probe  
block is seated within said probe block frame such that a portion of said  
6 respective self-centering spring is seated in said respective frame self-  
centering spring receptacle.

2 9. A probe block assembly in accordance with claim 8, wherein:  
said plurality of frame self-centering spring receptacles are  
countersunked.

2 10. A probe block assembly in accordance with claim 3, wherein:  
said first axis is perpendicular to said one or more probes of said  
probe block.

2 11. A probe block assembly, comprising:  
a probe block, said probe block comprising a probe block body, one  
or more probes, and one or more pairs of self-centering spring receptacles,  
4 each pair of said one or more pairs of self-centering spring receptacles  
characterized by identical dimensions, and each receptacle in a pair of said  
6 one or more pairs of receptacles located coaxially to the other receptacle in  
said pair and opening to different sides of the probe block, said probe block  
8 body having a first probe block body dimension along a first axis and a  
second probe block body dimension along a second axis;  
10 one or more pairs of self-centering coil springs, each pair of said one  
or more pairs of self-centering coil springs characterized by identical coil  
12 spring dimensions and coil spring characteristics, and each self-centering  
coil spring of a respective pair of said self-centering coil springs respectively  
14 seated in a respective self-centering spring receptacle of a respective pair of  
said self-centering spring receptacles; and  
16 a probe block frame which floatably seats said probe block on said  
one or more self-centering coil springs within said probe block frame along  
18 said first axis, said probe block frame having a first probe block frame  
dimension along said first axis that substantially matches said first probe  
20 block body dimension of said probe block body plus a predetermined small  
amount sufficient to allow said probe block to float within said frame along  
22 said first axis but insufficient to allow significant displacement of said probe  
block from a centered position of said frame along said first axis, and said  
24 probe block frame having a second probe block frame dimension along said  
second axis that substantially matches said second probe block body  
26 dimension of said probe block body plus a predetermined small amount

sufficient to allow said probe block to float within said frame along said  
28 second axis but insufficient to allow significant displacement of said probe  
block from a centered position of said frame along said second axis.

12. A probe block assembly in accordance with claim 11, wherein:  
2 said first axis is perpendicular to said one or more probes of said  
probe block.

13. A probe block assembly in accordance with claim 11, wherein:  
2 at least one pair of said one or more pairs of self-centering spring  
receptacles comprise a cylindrical bore with circular cross-sectional area  
4 characterized by a cylindrical bore diameter and a cylindrical bore length;  
and  
6 at least one pair of said one or more pairs of coil springs comprise a  
coil spring characterized by a coil spring diameter smaller than or equal to  
8 said cylindrical bore diameter and a linear coil spring length greater than said  
cylindrical bore length.

14. A probe block assembly in accordance with claim 13, wherein:  
2 said probe block frame comprises a plurality of frame self-centering  
spring receptacles, one each coaxially aligning to one each of said one or  
4 more self-centering spring receptacles of said probe block when said probe  
block is seated within said probe block frame such that a portion of said  
6 corresponding self-centering coil spring is seated in said respective frame  
self-centering spring receptacle.

15. A probe block assembly in accordance with claim 14, wherein:  
2 said plurality of frame self-centering spring receptacles are  
countersunked.

16. A probe block assembly in accordance with claim 14, wherein:  
2 said plurality of frame self-centering spring receptacles and said  
plurality of probe block self-centering spring receptacles are countersunked.

17. A probe block assembly in accordance with claim 13, wherein:  
2       said cylindrical bore diameter is a predetermined amount greater than  
      said coil spring diameter sufficient to allow said respective coil spring to float  
4       within said cylindrical bore along said second axis but insufficient to allow  
      significant displacement of said coil spring from a centered position within  
6       said cylindrical bore along said second axis.

18. A probe block assembly in accordance with claim 17, wherein:  
2       said probe block frame comprises a plurality of frame self-centering  
      spring receptacles, one each coaxially aligning to one each of said one or  
4       more self-centering spring receptacles of said probe block when said probe  
      block is seated within said probe block frame such that a portion of said  
6       respective self-centering spring is seated in said respective frame self-  
      centering spring receptacle.

19. A probe block assembly in accordance with claim 18, wherein:  
2       said plurality of frame self-centering spring receptacles are  
      countersunked.

20. A probe block assembly in accordance with claim 13, wherein:  
2       said first axis is perpendicular to said one or more probes of said  
      probe block.